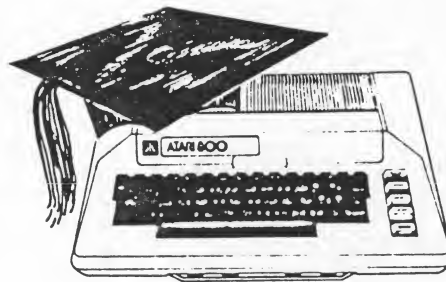


T.H.E. SMART TERMINAL[®]

BINARY
BINARY
BINARY



ASSEMBLY LANGUAGE INTERACTIVE
TERMINAL COMMUNICATIONS PROGRAM
WITH MULTIPLE FILE UPLOAD AND DOWNLOAD

for the
ATARI 400 & 800 COMPUTERS
with a minimum of 16KB of RAM Memory

CONTENTS

Introduction	2
What You Need	5
Equipment Set-Up	6
Modems	6
Baud Rates	6
Asynchronous/Synchronous	7
Commercial Services	7
Operating Instructions	10
Input Command Structure	10
Backup	10
Booting (Start-Up)	10
Cassette Loading	10
Disk Loading	10
Main Menu Selections	11
<E> Erase Buffer	11
<I> Input File	11
<O> Output File	12
<R> Receive Data	13
<S> Send Data	13
<T> Terminal Mode	14
<D> DOS Menu	15
<C> Configuration Menu	15
Configuration Menu Descriptions	16
 Baud Rate	16
<X> Translate	16
<P> Program Parameters	17
<A> Atari/ASCII Tables	19
Saving Your Configuration	20
Cassette to Disk Version	21
Configuration Tables	Appendix A

PART I

INTRODUCTION

TO

T.H.E SMART TERM

c 1982 By Tom Giese and
Binary Corporation

T.H.E. SMART TERMINAL

An Overview

Congratulations! You have just purchased a very versatile and efficient communications program for your Atari Computer.

T.H.E. SMART TERMINAL is the ideal software package for anyone who intends to communicate with commercial timesharing systems (such as The Source, CompuServe, Dow-Jones and other commercial services), host computer systems, bulletin board systems, a friend's computer system and even systems which require special control functions not found on the Atari keyboard.

To communicate with The SourceTM, CompuServeTM, or Dow-JonesTM, you will need a 300 Baud or 1200 Baud Modem, an 850 Interface and a Modem Cable. See Chapter 2D for sign-up information.

To communicate with other systems, you will need an appropriate modem, an ATARI 850 Interface and a Modem Cable. You will need to know how to log onto the system, and you will have to find out what kind of control characteristics the system wants to see. One of the unique and powerful features of T.H.E. SMART TERMINAL is its emulation capabilities. You actually have the ability to redefine what each keystroke on your Atari sends to the Modem port separately from what it interprets in receive mode! Thus, if the host needs to see an ASCII 083 06 whenever you want to enter a certain mode, you can define, say, <CNTRL> <G> on the Atari keyboard to send that code.

With T.H.E. SMART TERMINAL, you can access "Bulletin Board" systems for news and information. These "Bulletin Board" systems are usually sponsored by user groups, and contain a great deal of useful programming tips, sample programs and message handling capabilities. T.H.E. SMART TERMINAL will permit you to receive a program from such a system, store it on your disk or tape and run it on your system after you disconnect from the telephone line.

If you have an Auto-Answer Modem, you can use T.H.E. SMART TERMINAL to accept incoming calls from other computers. The operator at the other end can leave you a message which you can retrieve at your convenience.

This program is written in assembly language and is completely menu or command driven. The operating parameters may be changed when still on line to another computer without disconnecting, and you can output everything to a printer, a disk or a tape.

We suggest that you read your documentation through thoroughly, before you attempt to establish a communication link using T.H.E. SMART TERMINAL. Because there are a great number of possible configurations resulting from all the menu selections, it will be much less frustrating if you know exactly what parameters are needed before you attempt to connect with another system. Our documentation will try to step you through, but you must know what the other system needs to see on the line before you try to configure.

T.H.E. SMART TERMINAL has been thoroughly field tested. Users at major corporations have implemented T.H.E. SMART TERMINAL on Atari Computers to talk to systems such as DEC System 10 Mainframes, Amdahl Mainframes, Honeywell Systems in ASCII Mode, Prime Minicomputers, and, of course, other Atari Computers. However, since it is impossible to try every combination and perform every possible task, we cannot guarantee that program "bugs" may not appear. We can, however, try our best to offer fixes and patches should such be necessary. Please read our warranty clause and try to work with us.

We are certain you will find this program very useful, and sincerely solicit constructive criticism. Please address your correspondence directly to us.

Happy Communicating!

T.H.E. SMART TERMINAL

WHAT YOU NEED

- 1) An Atari 800 or 400.
- 2) A minimum of 16K RAM. (T.H.E. SMART TERMINAL will use all available RAM space for buffering, or temporarily storing data between your modem, disk, cassette, keyboard and printer. So, the more memory you have, the faster and more efficiently your system will perform.)
- 3) One 410 Program Recorder or one 810 Disk Drive.
- 4) Several blank cassettes or several blank diskettes.
- 5) An Atari 850 Interface.
- 6) An Atari 830 Modem or any 300 baud to 9600 baud modem including auto-dial modems like the Hayes Smartmodem.
- 7) A modem cable to connect the modem to the 850 Interface.
- 8) A telephone line.
Note: See Chapter 2A for information on modems.
- 9) A TV set or monitor .
- 10) Your T.H.E. SMART TERMINAL cassette or Disk.

Preparing to use T.H.E. SMART TERMINAL

Equipment Set-Up

A) Modems

Your modem should be connected between Port #1 on the Atari 850 Interface and your telephone line.

The connection to the ATARI 850 is made with an RS232C modem connector cable. This cable provides the serial data link between the Atari 850 and the modem. We suggest that you purchase a cable which is factory assembled and tested unless you have the tools to properly crimp or solder the wire onto the pins. This cable will have an RS232C connector on one end for the modem and an Atari connector on the other for the 850 interface. Cables are available directly from Binary for \$44.95 or from your local Atari dealer. Ask for the Binary Para-Cables for high quality and high performance.

Modems are available as either direct connect, acoustic coupling, or as a combination of the two:

Direct Connect Modems plug directly into a modular phone jack like the one at the rear of your single line telephone. If you have a 4 prong jack on the wall you must buy an adaptor to convert to modular. If you have a key set phone or a PBX, you must buy modular line adaptors to accept your direct connect modem. Such accessories are available directly from Binary.

Acoustic Modems use sound or induction coupling to transfer data over the lines. The advantage of such a coupler is that you can use it almost anywhere there is a standard headset without any jacks or adaptors or rewiring.

This type of modem does not work with decorative phones like the Bell Princess, Slimline, etc.

We recommend a direct connect modem where feasible. Direct connect modems are not susceptible to room noise like acoustic modems are, so data integrity is much better.

B) Baud Rates

Most of the lower cost modems will allow data transmission rates of 300 baud. A baud is a measure of logical data on time to off time (mark/space) and comes from the old teletype Baudot type of transmission. What is important to remember is that bauds divided by 10 is approximately characters per second.

Thus, a 300 baud line will allow you to send and receive data at 30 characters per second (cps), a 1200 baud line at 120cps and so on.

You must match the line speed of the service you are connecting to with that of your computer. Your system will not work with a remote computer at 1200 baud if you only have a 300 baud modem, though the T.H.E. SMART TERMINAL program is configurable for the higher speed. Also, you cannot use a 1200 baud modem on a 300 baud line even though the 1200 Baud modem is faster. You will need two modems to run 1200 and 300 Baud or one modem that has two selectable speeds.

We suggest that you check out modems very carefully, in order that you get the one best suited for your needs. Our experience has shown that the models we normally carry are very reliable and will work well with your system.

Please plan the use of your new communications system. Dow JonesTM, CompuServeTM, and other sources of information, have 1200 baud dial-up lines that will help keep your costs down if you are a heavy user. The additional expense of a 1200 baud modem might well be justified if it can be paid off with several months of reduced billings.

C) Asynchronous/Synchronous

We know that many of you will want to try to talk to your office computer. Some of you have micros like the Apple, some have minis like a Zenith or a DEC and a lot of you have IBM System 34 or Series 1's.

T.H.E. SMART TERMINAL will allow you to connect to almost any ASCII asynchronous communication channel. You cannot communicate with your BISYNC port (2780, 3270, etc.). If you wish to do so, you can purchase an ASCII to EBCDIC converter that will perform the protocol conversion. This converter and a synchronous modem will enable you to do RJE (remote job entry) to a BISYNC channel.

D) Commercial Services

Now that your modem has been purchased and installed, we are sure that you are anxious to go "on-the-air".

First, you will need someone to talk to.

We suggest trying these services:

CompuServeTM

Information Services

5000 Arlington Ctr Blvd
Columbus, Ohio 43220

The SourceTM

Department CB-5

1616 Anderson Road
McLean, Virginia

Dow-JonesTM

P.O. Box #300
Princeton, NJ
08540

You will have to send away for literature and an application package and return all the forms completely filled out with your subscription fee attached. In return, you will get a local telephone number to call (or at least nearby), a password for access to the system, and a set of manuals.

You will be billed for connect time. So even if you are connected and no data passes back and forth, you will still be charged. We suggest that you know what you want to do before you connect. Plan your calls in advance and read your manual off-line.

You will begin to see the advantage of a higher speed modem and the off-line file editing capabilities of T.H.E. SMART TERMINAL as you begin to use these services more.

PART II

OPERATING INSTRUCTIONS

FOR

T.H.E SMART TERMINAL

c 1982 By Tom Giese and
Binary Corporation

Operating Instructions

Now that you have your modem connected to your telephone and the 850 Interface, you are ready to use your computer system to connect with the remote computer.

Follow these simple steps

Note: We use Brackets <> to enclose the key or keys you are to hit to enter a command. The words TYPE is used if you are to actually type out more than one key. For example: <G> means to hit the G button while TYPE <END> means to type out the word END as you would on a typewriter.

1) Backup your disk or cassette.

DO THIS FIRST. DO NOT PROCEED ANY FURTHER. USE YOUR BACKUP COPY ONLY - NEVER USE YOUR ORIGINAL.

To make a bootable copy of T.H.E. SMART TERMINAL, format a blank diskette (ATARI DOS MENU ITEM I). Select Menu Option J (Duplicate Disk) to copy the T.H.E. SMART TERMINAL files from the master distribution disk to your new diskette. You now have a bootable copy of T.H.E. SMART TERMINAL to use as your working master.

To make a bootable copy of your cassette version, load the program as shown below and chose Main Menu Option D to Duplicate the cassette file onto a blank cassette.

* Put your original safely away. *

2) Boot up your system.

Cassette Version: Remove BASIC or any other ROM cartridge from slot(s). Place cassette into 410 Recorder and rewind to beginning. Turn on your 850 and your modem. Press the <PLAY> button on your 410 Recorder. Turn off your 400 or 800 Computer. While holding down the <START> button with one hand, turn the computer on with the other. Your computer will "beep". Hit <RETURN> after you hear the beep, and the tape will start to load. Loading takes about 2 minutes. The Main Menu will appear when loading is complete.

Disk Version : Remove BASIC or any other ROM Cartridge from slot(s). Turn on the 810 Disk Drive, the 850 Interface, and your Modem. When the BUSY light on your 810 goes out, insert the T.H.E. SMART TERMINAL diskette into your 810, close the door, and turn your 400 or 800 Computer on. The Main Menu will appear when loading is completed.

3) Choose your selection from The Main Menu.

This is the list of Main Operation Commands which you can give to the system. To perform any function just enter the letter of the command.

The following section describes the operation of the Main Menu and gives examples concerning its practical use.

Main Menu Instructions

T.H.E. TERMINAL VER. 3.1 MAIN MENU

E Erase Buffer
I Input File
O Output File
R Receive Data
S Send Data
T Terminal Mode
C Configuration Menu
D DOS Menu

Main Menu

<E> Erase Buffer

This command resets the buffer pointers to zero. This command is automatically executed when the program is entered. The buffers are not cleared by any other command. Enter the number of the buffer you wish to erase, <A> to erase all buffers.

The Buffers are used to store incoming or outgoing data in computer memory so that data or programs can be saved on disk, outputted to a printer, or transmitted to another system. Since we cannot take data directly from disk and output it to the modem, buffers are used as temporary holding areas.

T.H.E. SMART TERMINAL allows you to have many different areas in memory, with different buffer numbers, holding different data. Selection <E> will erase the buffer of your choice, to make more room in memory for other data.

Buffers are identified by number only.

<I> Input File

* This command allows you to store the contents of a file (data on disk or cassette) in one of the buffers in memory for transmission when you are ready, or to input directly from the keyboard to any buffer. You will be prompted for a file name. You should answer by TYPING a file name in the format <D:FILENAME.EXT> if you are using disk files; or entering <E:> for the screen editor if you wish to input data to the buffer directly from the keyboard, or <C:> if you will be loading the buffer with a file on cassette. The disk or cassette file will be opened and read into the buffer you selected. If the screen editor <E:> is used to enter the data to be sent, the screen is cleared and you type in the information you wish to put in the buffer. To exit the screen editor, enter <CTRL> <3>. If you don't clear a buffer before reading another file onto the same buffer, the new file

will be appended to the end of the old file. If your input file is too large for the amount of memory available in your Atari, the program will display:

Buffer full

and you must split the file into 2 or more files to send it.

Use this function to transmit a file consisting of telephone number, password, ID, etc., that will log you onto a timesharing service. Or send (upload) a file or a program from disk or cassette to a friend's machine. *

Another application would be if you were working on a remote system and you wanted to use your ATARI to write a program to execute on the remote computer. You would write the program with a text editor on the Atari, saving it as a text file on the Atari disk or cassette. Then you would use T.H.E. SMART TERMINAL to input the file to a buffer and send it to the host for execution.

<O> Output file

This command is used to output received data that you saved in one of the buffers while you were receiving it over the modem line. You can move the contents of a buffer to disk or tape, a printer, or any other addressable device. A buffer is not cleared by this command so you may save more than one copy of the data if you wish. The program will prompt for a filename to save the received data under. You should TYPE a filename in the format <D:FILENAME.EXT> if you are saving the data on disk, or <C:> for the cassette, or <P:> for the printer, or if you just want to look at what you saved on the screen, <E:> for the screen editor. *

It is important to remember that you can implement both input and output buffers concurrently. This buffer takes received data and holds it in memory so you can perform your filekeeping chores when you are off-line. (Selection <I> takes data and readies it for transmitting.) *

You can look at the entire contents of this buffer on the screen <E:> and use the screen editor to stop the upwards scrolling by hitting <CTRL> <I>.

This selection is very useful for reviewing what was received after you have disconnected from the line. This allows you to work with the data without paying costly connect fees.

Or, if you were to review a program you wrote at work that resides on your company's computer, you could download (receive) the data into memory (Option R) and save it on disk on your Atari 310 or on your ATARI 410 recorder. You can print it out, edit it, and send back the revised version for execution on the mainframe.

You do not need Fortran, COBOL, PL1, or any other language on the Atari to write a program for execution on a mainframe. A program can be written with a text editor on your Atari and sent to the host for execution, called back and modified off-line, sent back for another try, and so on.

<R> Receive Data

This command initiates the collection of all received data into a buffer in memory. Every character received will be stored into the buffer. If the memory required for the next character is not available, the program will display:

Buffer full

and go into terminal mode (see <T>). While in this mode, the keyboard is enabled for response to the computer you are connected with. As data is accepted into the buffer, the text will display in inverse video, dark green on light green. To exit the Receive Data Mode, hit <SELECT> to return to the main menu, or <OPTION> to enter a new command. If you did not clear the buffer, the new transmission will be appended to the end of the previous data. To resume filling the buffer after you stop hit <OPTION> <R>.

This mode is used to store received data in a memory buffer PRIOR to dumping the buffer to disk, cassette or printer using OPTION O.

To get your system on-line and ready to receive data, hit the <OPTION> button on your keyboard to return to the Main Menu and chose this option <R> to begin saving data.

Remember that all data coming in on the line will be put into the buffer. Thus, if you initiate an exchange with the remote CPU, that data will also be put in memory. You may have to go back into your saved file to edit out such data.

<S> Send Data

This command rewinds the pointers of the selected buffer to the beginning, waits 3 seconds and sends the contents of the buffer. When all of the buffer has been sent, the program enters Terminal mode (see <T>). While you are sending a file, if you hit the <SELECT> button, the terminal emulator will stop sending the file and return to the main menu. To resume sending, enter <OPTION> <T> for the Terminal mode then hit the <START> button. The remainder of the buffer will be sent. When the end of the file is reached, the program will display:

End of file

and you will enter terminal mode again.

This mode is used to transmit the data you placed in a buffer after you executed Option I, Input File. *

Like Option R, you can set up your system when off-line. Load the data into memory that you want to send by using OPTION I. Connect to the remote CPU using the Terminal Mode (Option T) and send any password or ID information from the keyboard. When you are ready to send the data that you loaded into the memory buffer, hit <OPTION> <S> and whatever you have in the specified buffer will be sent. *

For example, you may want to establish a disk or cassette file having all your stock identifiers and send it to the Dow-Jones computer all at one time so you don't have to key each entry in and use precious connect time. Create a file with the list of stocks presented exactly the way you would send them if you were on-line with Dow-Jones. Save the file and load it into a buffer using <OPTION> <I>. Connect with Dow-Jones using <OPTION> <T> and prepare to receive stock quotes. When you are ready, select <OPTION> <S> to send the contents of buffer #1 and <OPTION> <R> to receive the data you get back on the stocks into buffer #2. After you have received all the information you need, disconnect from the line and use <OPTION> <O> to output the data received in buffer #2 to a printer, the screen, disk, or cassette. *

<T> Terminal Mode

This mode is just like a terminal. No data is saved, and no file is sent. As you hit each key, the character is sent to the computer you are connected with. To exit this mode, hit

<SELECT> to return to the main menu,
<OPTION> to enter a command,
<START> to send the contents of a buffer.)) **

This is the system on-line conversational mode.

Use this Option to send and receive character data to and from your computer without saving data.

You can connect with a friend's computer and have two way conversations, call a bulletin board system, and many other computer networks.

When in Terminal Mode you can always switch to one of the Buffer Options by hitting <SELECT> or <OPTION>. Doing so will not disconnect you from the line unless you take too long to make up your mind and the remote system times out. *

You can send and receive data through a buffer with control over your disk, cassette and printer, while you are connected on-line. Try switching back and forth as an exercise.

Call a remote CPU and log on in Terminal Mode. While receiving data, switch to <OPTION> <R> for several minutes (or until your buffer is full) and select <OPTION> <O> to write the data to disk or cassette (we suggest that you use a disk other than your master T.H.E. SMART TERMINAL diskette).

Disconnect from the remote system and try viewing the data you received by dumping the file contents to the screen using the ATARI DOS Menu Selection C "Copy a file." Copy from file name <D:Filename.ext> to <E:> and stop the scrolling using <CTRL> <I> to see how much of the conversational data you managed to save and experiment with your timing and technique to avoid getting extraneous data saved with your file. Then try using <OPTION> <O> to output the same data to your printer.

<D> DOS Menu

* This command returns you to the ATARI DOS menu. Be sure the diskette in your disk drive has MEM.SAV on it. T.H.E. SMART TERMINAL is located low in memory, so the MEM.SAV file is used. To return to the terminal mode, enter <M> (run at address), and TYPE <2447> for the run address. Your buffers will not be erased when the terminal is re-entered at this address, so you can safely go back and forth between terminal mode and DOS. The cassette version has a 'Duplicate' option instead of the DOS option.

<C> Configuration Menu

This selection will display another set of Menu Commands which you can use to set-up your communications characteristics. The following section describes these commands in more detail. There are certain system default values which are listed below, and common settings for most instances are given in the tables in Appendix A. You do not have to enter these configuration values each time you use your terminal. You can set up several different configurations and save them on different disks as described in the section on How To Save Your Configuration.

T.H.E. Terminal Configuration Menu

- B. Baud Rate
- X. X'late (translate)
- P. Program Parameters
- A. Atari/ASCII Tables
- M. Main Menu

 Baud Rate

This selection will take you into the Baud Rate Configuration Screen. Select the transmission speed suitable for the Modem you are using. You must select the speed for which your modem is designed. You cannot use a 300 Baud modem at 1200 Baud or a 1200 Baud modem at 300 Baud.

Select the desired baud rate from the list on the left of the screen and note the number associated with that rate just to the right. Add that number to the number associated with your stop bit choice.

Stop bits are used to tell the other computer system where your words ends, and help the system to synchronize its transmission. In most cases, the systems you will be working on will require stop bits. We suggest that you define what your system configuration must be by contacting the timesharing service directly or experiment with different configurations.

See your Atari 850 Manual, page 45, for more data.

<X> Translate

This selection will give you the option of converting Atari ASCII code (ATASCII) to regular ASCII code on both transmit and receive. ASCII code is a standard for character definition, and most systems you will want to work with (except other Ataris) will want to see ASCII code rather than ATASCII.

You can select NO TRANSLATION to talk Atari to Atari.

Select LIGHT TRANSLATION for talking to an ASCII line (like CompuServe, Dow Jones, etc.) that you will want to edit on your Atari in Atari code. This mode changes the Atari End of Line (EOL) to an ASCII carriage Return (CR) and Line Feed (LF).

Select HEAVY TRANSLATION for strict ASCII sending and receiving. Only characters which are the same in each mode will be transmitted or received. A "Won't Translate" character gets sent or displayed for anything else (an ASCII 0 or a heart will show up on your screen).

We suggest using LIGHT TRANSLATION for most timesharing applications, and HEAVY TRANSLATION when you do your own ATASCII to ASCII conversions from the Tables in Selection A.

<P> Program Parameters

This menu selection asks you nine questions about how you want your terminal configured. You may SKIP this option if you can use the default values of:

- | | |
|------------------------|-----------------------------|
| 1. Terminal Mode | 5. Left Margin at TWO (2) |
| 2. No Echo to Modem | 6. Save Text Only |
| 3. Full Duplex | 7. X-ON/X-OFF Mode defeated |
| 4. Non-Smart Send Mode | 8. Translation Tables Used |
| | 9. 850 Port #1 |

If you would like to, or have to, change any of the nine parameters, you can do so by answering the questions as they are asked to you.

#1 Determines the limits as to how fast you can send and receive data. This option will turn the computer display list off to give the CPU more computing power. Since the computer doesn't have to worry about working with the display screen, you can send and receive data files to disk at speeds up to 9600 Baud. This is really only useful for computer-to-computer hard wired applications, or file transfers at modem speeds of 2400 or 4800 Baud. In most cases, you will use the "Yes" answer and work with the display in terminal mode.

#2 Determines whether you are the terminal or the computer on a network link. If you are working as a terminal on another system, you will normally want to chose "N" and not echo characters to the modem. If you are using your system as a host to receive data from other terminals, or to transfer files, select "Y".

#3 Determines your mode of operation. Full or Half duplex. Full Duplex will not echo transmitted data on the screen. The system you are hooked up with will echo for you if it is a full duplex system. Half duplex means you are only sending data in one direction. The machine you are hooked up with in half duplex cannot echo characters back to you because you are tying the line up sending your characters out. Thus, in Half Duplex mode your own system must echo characters back to you locally. You can tell if you have the wrong selection by what happens on your screen. If you receive two characters when you type, then you have selected Half Duplex mode on a Full Duplex line; one character for local echo, and one character from the other system. If you get no characters when you type, but receive an answer back from the host, then you selected Full Duplex on a Half Duplex line; No local echo and no characters returned by the other machine, but your data gets transmitted. If you get anything else, it should be right, unless you get nothing at all.

#4 This determines whether or not you want everything in a file sent exactly as is, and whether you want to do simple echo back character checking. Use "N" for normal communications, and for sending a mirror image of a file. Use "Y" to stop the transmission at a <RETURN> or when the character echoed back does not match the character sent.

#5 Left Margin (0-3)? Enter a number 0-3 for the left margin setting. Entering 0 will allow 40 characters on each line.

#6 Determines whether you want all characters received to be saved in memory. Sometimes you will want to "strip-out" anything but recognizable ASCII characters and carriage returns because your system won't be able to use the other computer's control codes and they really mess up the file. In that case, select "Y" to only save ASCII characters. Select "N" to save everything.

#7 Determines whether you will be in the X/ON - X/OFF mode for transmission to other systems that recognize a <CTRL> <S> as a "stop transmitting" signal and <CTRL> <Q> as a resume sending signal. This protocol is used on many private host machines to control data transmission from several external remote devices. When talking to systems like Digital Equipment, Prime, etc, you will most likely need to implement X/ON - X/OFF. Normally, you will operate under choice "N", with the protocol defeated.

#8 This option selects the normal translation mode discussed under Terminal Configuration Menu Selection X or the translation mode discussed under Terminal Configuration Menu Selection A. Please see each of these selections for more detailed information. Normally, you will operate under selection "Y", unless you are talking to another Atari.

#9 This option will allow you to select the Atari 850 port which will be connected to your modem. The default is Port #1, but you may want to use one of the three other serial ports if you have or intend to have, RS232 devices attached to some of the serial ports.

<A> Atari/ASCII Tables

This option allows you to change the translation of characters received and transmitted by the terminal program. You can change the translation in either direction or both. For example, the terminal translates the <BACK SPACE> key to an ASCII, ASCII value 127. If you wish to change the translation to ASCII <BACK SPACE>, ASCII value 008, enter <3> for translation in both directions, <127> for the Atari value, and <8> for the ASCII value. You can also use this option for message encryption.

Normally, you will use this option only to establish a new configuration. You may be able to get logged onto a system at work that needs to see different control codes for <CR> (carriage return), <LF> (line feed), <BS> (backspace), (delete), <TAB>, upper case shift, special characters, etc. Find out what the decimal codes are for each of the characters your host machine wants to see and go down the Atari side of the table. When an ATASCII character does not match, just enter the value you want transmitted. Do the same to convert the non-ATASCII characters to characters the Atari will understand. When you have completed the entire table SAVE YOUR CONFIGURATION in a file as described in the next section, Saving Your Configuration.

Please note that this table will not permit the conversions of dual key sequences automatically. For example, a <ESC> <Q> on the Atari cannot be translated to an ASCII reverse arrow. Each of the characters alone can be translated so that the output will be two characters also.

Saving Your Configuration

Now that you have taken the time to configure your system, you will want to save it on disk or cassette so you don't have to go through all that work again.

The default values are always saved in the main system as you received it. You will only have to save a configuration if you altered the system default values.

You can configure as many different systems as you like. By saving your most popular set-ups on disk or cassette you will be able to get started right away. Just use the system configuration you need.

On Cassette: Enter Option "D" (duplicate) from the Main Menu. Then enter <C:> for the filename. (No filename is needed; just <C:>). Your configuration will be saved to cassette.

Note: Since you can't "call-up" filenames from a cassette, you will need to save separate versions of T.H.E. SMART TERMINAL for each configuration. Do so by noting the tape counter position or by using a separate cassette for each version.

On Disk: Load in DOS Version II and create a MEM.SAV file on the desired disk PRIOR TO CONFIGURING YOUR SYSTEM. We will assume that you have read the documentation on how to use the MEM.SAV file which came with your ATARI 810 Disk Operating System. It is not difficult to implement. Merely follow the directions once you have chosen the selection from the DOS Menu. Boot up T.H.E. SMART TERMINAL and enter all desired configuration options. When finished, return to DOS via Menu Selection D. Enter <K> (binary save) from the DOS menu, and enter

AUTORUN.SYS,23F0,369C,,23F0

for the save specification.

TO MAKE A DISK COPY OF THE CASSETTE VERSION OF
T.H.E. SMART TERMINAL

1. Remove any cartridges from your ATARI 400/800 Computer.
2. Turn on your 810 Disk Drive and insert a diskette containing ATARI DOS II.
3. Turn on your computer and load the DOS MENU.
4. Remove your DOS diskette and insert a blank diskette into your disk drive.
5. Select option I from the DOS Menu (format a disk) and format drive D1:
6. Select option H (write DOS files) and write DOS to drive D1:
7. Select option N (create MEM.SAV file), follow the directions, and save your result on drive D:.
8. Turn off your computer, but leave your disk drive on with the DOS diskette you made still in it.
9. Insert your T.H.E. SMART TERMINAL tape in the cassette player and wind the tape to a count of 50. If you have trouble loading the cassette version, use a regular audio recorder to locate the start of the disk version (which appears several seconds after the cassette version ends). Rewind the tape several turns from the point that you hear the high pitched audio to allow ample start up time.
10. Hold down the <START> button and turn on your computer. You should get a blue screen and a single beep.
11. Press <PLAY> on the tape player.
12. Press <RETURN>.
13. The tape will load in about 2 minutes. When loaded, the disk will boot up into the DOS Menu.
14. Select option K (binary save) and TYPE:
AUTORUN.SYS,23FO,369C,,23FO <RETURN>
15. The file you loaded from your distribution cassette will be written to disk. You now have a bootable disk version of T.H.E. SMART TERMINAL.

APPENDIX A

CONFIGURATION TABLES

Use these tables to get up and running quickly on most major commercial services, bulletin board services(BBS), or to talk to other computers.

Choose the configuration best suited for your needs and enter the appropriate values as you go through the Configuration Menu options.

Try the configuration out on-line and save it on disk or cassette.

	COMMERCIAL BBS *	NO XON	MAINFRAMES WITH XON	SERIAL PRINTERS NO XON	WITH XON
Display	Y	Y	Y	Y	Y
Echo	N	N	N	N	N
Full/Half	F	F	F	H	H
Smart	Y	Y	N	N	N
XON/XOFF	N	N	Y	N	Y
Tables	Y	Y	Y	Y	Y
Xlate #	0	0	0	0	0
Fill Chars	0	0	0	2 **	0

	ATARI BBS (AMIS)	Telelink & Dumb Terminal	High Speed Data Transfers ASCII	ATARI
Display	Y	Y	N	N
Echo	N	Y	N	N
Full/Half	F	H	F	F
Smart	Y	N	N	N
XON/XOFF	N	Y	N	N
Tables	N	Y	Y	N
Xlate #	32	0	0	32
Fill Chars	0	0 **	0	0

* Commercial Bulletin Boards include Compuserve, Dow Jones, The Source, Telenet and many others.

**Some hard copy terminals and printers require fill characters after each carriage return.

